

Attorney Docket No. 1454.1678

**In re Patent Application of:**

Application No.:

**Group Art Unit:**

**Filed: (Concurrently)**

**Examiner:**

For: METHOD FOR ALLOCATING RADIO COMMUNICATION RESOURCES AND  
NETWORK UNIT ASSOCIATED WITH A MULTI-CARRIER RADIO COMMUNICATION  
SYSTEM

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**Sir:**

In accordance with the duty of disclosure provisions of 37 CFR § 1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the subject application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ Form PTO-1449.
- 1b. ☒ Copy(ies) of IDS citation(s), except for U.S. Patents and U.S. Patent Application publications.
- 1c. ☒ English language copy of a communication(s) from a foreign Patent Office or a PCT International Search Report.
- 1d. ☒ English language translation (complete, Abstract or relevant portion(s)) attached to non-English language publications as indicated on the attached Form PTO-1449.
- 1e. ☐ Explanations of Relevancy of References (ATTACHMENT 1(e), hereto) for providing a concise explanation of non-English publications.
- 1f. ☐ List of Copending Applications (ATTACHMENT 1(f), hereto).
- 1g. ☒ List of Additional Submitted Documents (ATTACHMENT 1(g), hereto).

2. ☒ In accordance with 37 CFR § 1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is

(Check appropriate Items 2a, 2b, 2c and/or 2d)

- 2a. ☐ satisfied for the non-English language publication(s) cited on the enclosed "English language version of the search report or action which indicates the degree of relevance found by the foreign office". (See MPEP § 609, Minimum Requirements for an Information Disclosure Statement, Part A(3): Concise Explanation of Relevance, 8th Ed., Rev. 2)



- 2b. ☐ set forth in the application.
- 2c. ☐ satisfied for the non-English language publication(s) indicated on the attached PTO-1449 as having an English language translation (complete, Abstract or relevant portion(s)) attached thereto.
- 2d. ☒ enclosed as Attachment 1(e), hereto.

No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than search report(s) from a counterpart foreign application or a PCT International Search Report, if submitted herewith). 37 CFR §§ 1.97(g) and (h).

Respectfully submitted,

STAAS & HALSEY LLP

Dated: 2/21/06

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<b>FORM PTO-1449</b>  <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>  <b>INFORMATION DISCLOSURE STATEMENT</b>  <i>(Use several sheets if necessary)</i>	<b>ATTORNEY DOCKET NO.</b>		<b>APPLICATION NO.</b>
	1454.1678		08/09/04
	<b>FIRST NAMED INVENTOR</b>		
	Elena COSTA		
<b>FILING DATE</b>		<b>GROUP ART UNIT</b>	
Concurrently			

**U.S. PATENT DOCUMENTS**

*EXAMINER INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
	AA	2004/0081123 A1	04/29/2004	KRISHNAN et al.			

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NO.	DATE	COUNTRY	TRANSLATION YES NO		ABSTRACT
	AB	0 938 193 A1	08/25/1999	EUROPE			
	AC	197 23 090 A1	12/03/1998	GERMANY		X	
	AD	198 00 953 C1	07/29/1999	GERMANY		X	
	AE	198 20 684 A1	11/11/1999	GERMANY		X	
	AF	1 164 807 A2	12/19/2001	EUROPE			
	AG	03/010901 A1	02/06/2003	WIPO			
	AH	102 40 138 A1	08/14/2003	GERMANY		X	
	AI	1 418 776 A1	05/12/2004	EUROPE			
	AJ	102 49 668 A1	05/13/2004	GERMANY		X	

**OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)**

					TRANSLATION YES NO	
	AK	E. Costa et al., "Optimization of Capacity Assignment in MC-CDMA Transmission Systems", in Fazel et al., eds., Multi-Carrier Spread-Spectrum and Related Topics, 2002; pp. 217-224.				

<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	



**ATTACHMENT 1(e)**

<b>EXPLANATIONS OF RELEVANCY OF REFERENCES</b>	ATTORNEY DOCKET NO.	APPLICATION NO.
	1454.1678	2004051563
	FIRST NAMED INVENTOR	
	Elena COSTA	
	FILING DATE	GROUPART UNIT
	Concurrently	

German Patent 197 23 090 A1 (Reference AC) was cited in the International Search Report for International Application PCT/EP2004/051563 mailed March 18, 2005.

German Patents 198 00 953 C1 and 198 20 684 A1 (References AD and AD, respectively) were cited in the June 24, 2004 Office Action from the German Patent and Trade Mark Office for which an English translation is provided.



FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NO. 1454.1678	APPLICATION NO. 12
LIST OF REFERENCES CITED BY APPLICANT  (Use several sheets if necessary)		FIRST NAMED INVENTOR Elena COSTA	
		FILING DATE (Concurrently)	GROUP ART UNIT

**OTHER REFERENCES** (Including Author, Title, Date, Pertinent Pages, Etc.)

BA	Stefan Kaiser; "MC-FDMA and MC-TDMA versus MC-CDMA and SS-MC-MA: Performance Evaluation for Fading Channels"; Proceedings of IEEE 5th International Symposium on Spread Spectrum Techniques and Applications, 1998, pp. 200-204.
BB	H. Rohling et al., "OFDM Transmission Technique with Flexible Subcarrier Allocation"; IEEE Int'l Conference on Telecommunications ICT 1996; pp. 567-571.
BC	Thomas Keller et al., "Adaptive Multicarrier Modulation: A Convenient Framework for Time-Frequency Processing in Wireless Communications", Proceedings of the IEEE, Vol., 88, No. 4, May 2000; pp. 611-640.
BD	T. Kriengchaiyapruk et al., "Dynamic Allocation of Capacity in Utra TDD Systems"; 3G Mobile Communication Technologies, 26-28 March 2001 Conference Publication No. 477; pp. 262-266.
BE	Andrea Baiocchi et al.; "IP QoS Delivery in a Broadband Wireless Local Loop: MAC Protocol Definition and Performance Evaluation"; IEEE Journal on Selected Areas in Communications; Vol. 18, No. 9, Sept. 2000; pp. 1608-1622.
BF	"Broadband Radio Access Network (BRAN)"; HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 4: Extension for Home Environment; ETSI TS 101 761-4 V1.3.1 (2001-07); pp. 1-123.
BG	Khaled Fazel et al., eds.; "Multi-Carrier Spread-Spectrum & Related Topics", Third Int'l Workshop September 26-28, 2001; pp. v-viii.
BH	Mark Klerer, "Introduction to IEEE 802.20; Technical and Procedural Orientation; March 10, 2003, 44 pages.
BI	Elena Costa et al.; "Capacity Optimisation in MC-CDMA Systems", ETT European Trans. on Telecom; Vol. 13, No. 5, Sept/Oct. 2002; pp. 1-10.
BJ	Elena Costa et al.; "Adaptive Sub-Band Allocation in MC-CDMA/FDM Systems", Proc. Int'l OFDM Workshop, (InOWo) 2002, Hamburg, Sept. 2002, 5 pages.
BK	
BL	
BM	
BN	

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



**ATTACHMENT 1(g)**

<b>LIST OF ADDITIONAL SUBMITTED DOCUMENTS</b>	ATTORNEY DOCKET NO.	APPLICATION NO.
	1454.1678	10338053.1
	FIRST NAMED INVENTOR	
	Elena COSTA	
	FILING DATE	GROUP ART UNIT
	(Concurrently)	

The following document(s) is/are listed in accordance with the duty of disclosure provisions of 37 CFR § 1.56, so that the Examiner may consider same should he deem any thereof to be material to examination of the subject application.

It is requested that the Examiner acknowledge his consideration of document(s) below-listed by initialling same in the space provided adjacent each such application and that the Examiner sign and date this form at the bottom thereof to confirm such consideration having been given.

This submission in no way represents an admission that any of the information listed herein constitutes prior art with respect to the subject application; and unless and until such prior art status is established, this submission is not a request that the information presented herein be printed on the face of any patent issuing from the subject application in which this information is being filed.

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

			TRANSLATION	
			YES	NO
	AL	International Search Report for International Application PCT/EP2004/051563 mailed March 18, 2005		
	AM	German Office Action for German Application No. 103 38 053.1-42; mailed June 24, 3002.	X	

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if document considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	